

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

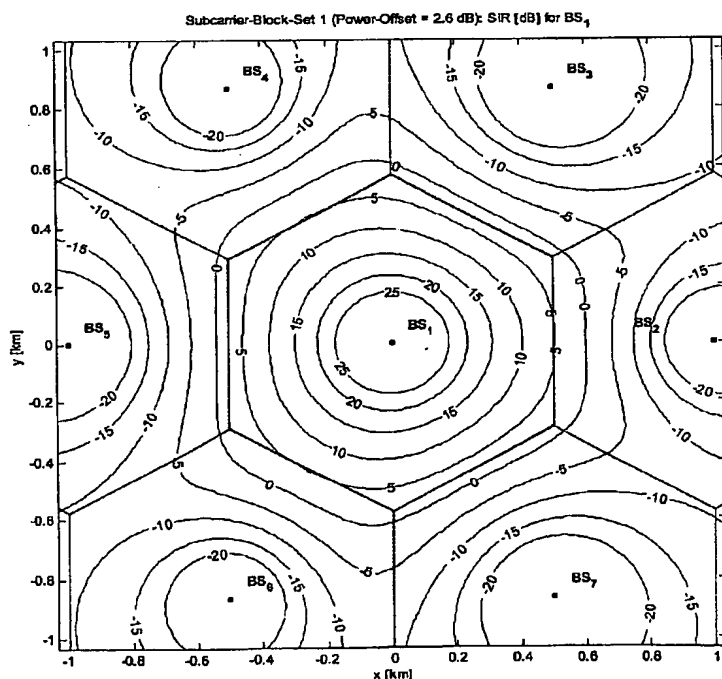
PCT

(10) International Publication Number
WO 2005/046275 A1

- (51) International Patent Classification⁷: **H04Q 7/36**, H04B 7/005
- (21) International Application Number: PCT/EP2004/012563
- (22) International Filing Date: 5 November 2004 (05.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 03025481.7 6 November 2003 (06.11.2003) EP
- (71) Applicant (for all designated States except US): **MAT-SUSHITA ELECTRIC INDUSTRIAL CO., LTD.** [JP/JP]; 1006, Oaza Kadoma Kadoma-shi, Osaka 571-8501 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **WENGERTER, Christian** [DE/DE]; Bahnhof Strasse 10d, 63924 Kleinheubach (DE). **GOLITSCHKE EDLER VON ELBWART, Alexander** [DE/DE]; Wilhelminenstr. 32, 64285 Darmstadt (DE).
- (74) Agent: **KUHL, Dietmar**; Grünecker, Kinkeldey, Stockmair & Schwanhäusser, Maximilianstr. 58, 80538 München (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TRANSMISSION POWER LEVEL SETTING DURING CHANNEL ASSIGNMENT FOR INTERFERENCE BALANCING IN A CELLULAR WIRELESS COMMUNICATION SYSTEM



(57) Abstract: The present invention relates to a method for balancing the distribution of interference between radio cells in a wireless communication system comprising cells in which subcarrier blocks are used for communication. A number of adjacent cells build a cell cluster. Moreover, the present invention relates to a corresponding method adapted for use in a system in which multi beam antennas or multiple antennas are used. Furthermore, the present invention relates to base stations performing the above method as well as a communication system comprising the base stations. To reduce the large average SIR variations without causing additional SIR estimation, measurement and calculation problem as introduced with power control the invention suggests to group subcarrier blocks into a plurality of subcarrier block sets in each cell of a cell cluster, to determine transmission power levels for each of the cells of said cell cluster, and to assign transmission power levels to the subcarrier block sets.

WO 2005/046275 A1



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.